



## Syllabus

### BIO 118 Contemporary Biology I

#### General Information

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**Date** May 18th, 2023

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**Department** Science and Technology

**Course Prefix** BIO

**Course Number** 118

**Course Title** Contemporary Biology I

#### Course Information

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**Catalog Description** An introductory biology course with laboratory designed for non-science majors. Topics covered include: the scientific process, cells, biochemistry, cellular metabolism, genetics, and biotechnology. The emphasis is on application of basic biological principles to contemporary issues and problems. Students will achieve basic scientific literacy with a goal of improved critical thinking, writing, and problem-solving skills.

**Credit Hours** 4

**Lecture Contact Hours** 3

**Lab Contact Hours** 2

**Other Contact Hours** 0

**Grading Scheme** Letter

#### Prerequisites

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None

#### Co-requisites

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None

#### First Year Experience/Capstone Designation

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**This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.**

# SUNY General Education

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**This course is designated as satisfying a requirement in the following SUNY Gen Ed categories**

Natural Sciences and Natural Sciences (and Scientific Reasoning)

## FLCC Values

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### **Institutional Learning Outcomes Addressed by the Course**

Vitality and Inquiry

## Course Learning Outcomes

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### **Course Learning Outcomes**

1. Students will describe and apply the basic principles of biology (biochemistry, the organization and energetics of the cell, genetics, and biotechnology) in relation to contemporary issues
2. Students will apply the methods and process of science, and be able to critically evaluate scientific articles in the popular press
3. Students will access information needed to make informed scientific decisions as necessary in their personal life as well as their role as educated citizens

## Outline of Topics Covered

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Theme 1: The Scientific Process

a. The Scientific Method

b. Pseudo-Science

Theme 2: Building Blocks of Life

a. Characteristics of Life

b. Cells

c. Biological Macromolecules

d. Nutrition

Theme 3: Energy of Life

a. Diffusion, Osmosis, and Active Transport

b. Enzymes

c. Photosynthesis & Cellular Respiration

Theme 4: Genetics

a. DNA Structure

b. Mitosis and Meiosis

c. Cancer

d. Classical Genetics

e. Gene Expression

Theme 5: Biotechnology

a. DNA Profiling

- b. Genetically Modified Organisms
- c. Stem Cells